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PULPWOOD PRODUCTION AND CONSUMPTION IN THE CENTRAL STATES, 1962 AND 1963

This is the eighth in a series of reports describing annual trends in the production and consumption of pulpwood in the Central States. Production reports are published so that industry people, forest managers, researchers, and other interested parties can stay abreast of changes in the utilization of our region's important forest products. The statistics presented here are needed for planning the expansion of forest-based industries and the management of our forest resources to best meet the demands of present and future generations.

We again wish to thank the pulpwood industry of the Central States area whose excellent cooperation makes this report possible.

A Shift Toward Residues

Between 1961 and 1963, a trend that had long been considered inevitable finally began to take place. The consumption of residues (chipped slabs and edgings and other primary and secondary plant by-products) by wood-using pulpmills in the Central States increased sharply. In 1961, the amount of residues consumed was equivalent to only a little more than 12,000 standard cords of roundwood or 2 percent of total pulpwood consumption. By 1963, residue consumption had increased to an equivalent of 92,000 standard cords--almost 16 percent of total consumption.

Ohio mills used 20 times more residue volume in 1963, than in 1961, and accounted for most of the regional increase in residue consumption. But the trend was by no means confined to Ohio. Total residues used by mills in the other Central States more than tripled over this span of years.

Most of the residues consumed in the region are hardwood slabs and edgings from sawmills located in, and immediately adjacent to, the six central states. The remainder consists of a variety of materials including sawdust, veneer cores, wood flour, and waste from millwork plants.

Many Central States mills are gearing their operations to increase the use of plant by-products and it is reasonable to assume that in the years ahead residues will continue to make up an increasing percentage of total pulpwood consumption.

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Consumption of All Pulpwood Up 12 Percent Over 1961

In 1963, the total consumption of pulpwood (roundwood and residues) in the Central States was up 64,000 cords--an increase of 12 percent over 1961 (table 1). The largest consumption gain took place in Ohio where a decline in the use of roundwood was more than offset by the large increase in residue consumption. Missouri mills, which almost tripled their use of all pulpwood between 1961 and 1963, made the largest percentage gain in consumption.

Overall, consumption gains were much greater from 1961 to 1962 (+11 percent) than from 1962 to 1963 (+1 percent). All states showed healthy gains from 1961 to 1962 but consumption fell off approximately 10 percent in each of the states of Illinois, Indiana, and Iowa from 1962 to 1963. The declines in these states, however, are believed to be only temporary and future consumption rates will probably continue to follow an upward trend in the Central States to keep pace with the ever-increasing national needs for pulp and paper products.

Table 1.--Pulpwood consumption by state--1961 to 1963

State	Round pulpwood and residues			Change 1961 - 1963
	1961	1962	1963	
	Cords[1/]	Cords	Cords	Percent
Ohio	292,747	302,217	330,531	+13
Illinois	103,197	118,780	107,553	+ 4
Indiana, Iowa, and Missouri[2/]	131,438	166,623	153,675	+17
Total	527,382	587,620	591,759	+12

1/ A standard cord is a 4- by 4- by 8-foot stack of rough bolts. Factors used in converting to standard cords were: 0.8 long cord or unit; 4,500 pounds of soft-hardwood roundwood; 5,000 pounds of hard-hardwood or coniferous roundwood; 4,100 pounds of soft-hardwood chips (green); and 4,300 pounds of hard-hardwood or coniferous chips (green).

2/ Combined to prevent disclosure of individual mill consumption.

Consumption of Roundwood Now 1/2 Million Cords Annually

Central States pulpmills used about 558,000 cords of roundwood in 1962 (table 2). This was an increase of 8 percent over 1961 and represented the greatest volume of roundwood consumption recorded during the history of the pulpwood survey. Then between 1962 and 1963 when the use of residues increased, roundwood consumption dropped 10 percent to just under 1/2 million cords (table 3). Although residue consumption rose sharply in 1963, roundwood still accounted for 84 percent of the pulpwood utilized.

Table 2.--1962 Round pulpwood consumption by state and species group

State	Conifers	Hardwoods		Total		Change from 1961	Value delivered at mill
		Hard	Soft				
	Cords	Cords	Cords	Cords	Percent	Percent	Thousand dollars
Ohio	375	224,139	66,813	291,327	52.2	+ 0.6	3,933
Illinois	2,194	14,568	89,691	106,453	19.1	+11.9	1,384
Indiana, Iowa, and Missouri 1/	--	78,821	81,373	160,194	28.7	+22.7	2,274
Total	2,569	317,528	237,877	557,974	100.0	+ 8.3	7,591

1/ Combined to prevent disclosure of individual mill consumption.

Table 3.--1963 Round pulpwood consumption by state and species group

State	Conifers	Hardwoods		Total		Change from 1962	Value delivered at mill
		Hard	Soft				
	Cords	Cords	Cords	Cords	Percent	Percent	Thousand dollars
Ohio	140	197,247	69,879	267,266	53.5	- 8.3	3,608
Illinois	924	21,176	68,602	90,702	18.2	-14.8	1,179
Indiana, Iowa and Missouri 1/	--	63,269	78,272	141,541	28.3	-11.6	2,010
Total	1,064	281,692	216,753	499,509	100.0	-10.5	6,797

1/ Combined to prevent disclosure of individual mill consumption.

As in past years, hard hardwoods[1/] accounted for the largest share of total roundwood consumption--318,000 cords or 57 percent in 1962 and 282,000 cords or 56 percent in 1963. Soft hardwoods[2/] accounted for about 43 percent and softwoods[3/] for less than 1 percent in both years. Ohio again maintained a wide lead over all other states in consumption. Ohio mills currently account for more than half of the total roundwood consumed in the region. Illinois, whose mills consume just under 20 percent of the total, ranks second.

Production of Roundwood Still Well Over 1/2 Million Cords

In 1962, the harvest of round pulpwood from the Central States reached a peak of almost 592,000 cords. This cut, valued at more than $8 million delivered at the mill, represents a 12 percent increase in production over 1961 (table 4). In 1963, roundwood production dropped back to about the same level as in 1961 (table 5).

1/ Hard hardwoods include hard-textured hardwood species such as oak, hickory, hard maple, and beech.

2/ Soft hardwoods include soft-textured hardwood species such as basswood, yellow-poplar, aspen, cottonwood, and soft maple.

3/ Softwoods include coniferous species--primarily pine.

Table 4.--1962 Round pulpwood production by state and species group

State	Conifers	Hardwoods		Total		Change from 1961	Value delivered at mill
		Hard	Soft				
	Cords	Cords	Cords	Cords	Percent	Percent	Thousand dollars
Ohio	725	194,265	63,153	258,143	43.6	+ 4.8	3,485
Illinois	3,428	27,103	89,873	120,404	20.4	+22.1	1,565
Indiana	--	43,612	43,406	87,018	14.7	+18.7	1,196
Iowa	--	14,087	14,403	28,490	4.8	+26.8	413
Kentucky	33,694	37,901	5,570	77,165	13.0	+ 5.2	1,061
Missouri	1,634	2,135	16,843	20,612	3.5	+39.2	319
Total	39,481	319,103	233,248	591,832	100.0	+11.9	8,039

Table 5.--1963 Round pulpwood production by state and species group

State	Conifers	Hardwoods		Total		Change from 1962	Value delivered at mill
		Hard	Soft				
	Cords	Cords	Cords	Cords	Percent	Percent	Thousand dollars
Ohio	1,822	168,607	65,948	236,377	44.5	- 8.4	3,191
Illinois	924	27,217	73,915	102,056	19.2	-15.2	1,327
Indiana	--	39,796	39,238	79,034	14.9	- 9.2	1,087
Iowa	--	9,200	10,372	19,572	3.7	-31.3	284
Kentucky	37,525	30,766	4,085	72,376	13.6	- 6.2	995
Missouri	--	2,653	18,829	21,482	4.1	+ 4.2	333
Total	40,271	278,239	212,387	530,897	100.0	-10.3	7,217

Production decreased in all the Central States except Missouri between 1962 and 1963. The largest drop occurred in Ohio (22,000 cords). However, the largest percentage drop in production occurred in Iowa (31 percent).

Hard hardwoods still remain the major species group harvested for pulpwood. The production of hard hardwoods has ranged from 278,000 to 319,000 cords in the past 3 years. But in all 3 years this species group accounted for well over half of the total production--56 percent in 1961, 54 percent in 1962, and 52 percent in 1963. Soft hardwoods amounted to approximately 40 percent and conifers to about 8 percent of the total harvest over these years.

Ohio has maintained its position as the leading pulpwood producing state in the region accounting for 44 percent of the total in 1962 and 45 percent in 1963. Illinois still ranks second. Indiana moved into third place surpassing Kentucky in 1962, and Missouri took over fifth place from Iowa in 1963. Illinois continues to be the leading producer of soft hardwood pulpwood, accounting for almost 74,000 cords or 35 percent of all the soft hardwood roundwood cut from the Central States in 1963. The harvest of softwoods from Kentucky has been increasing steadily and exceeded 37,000 cords in 1963. Kentucky currently accounts for 93 percent of the softwood harvested from the region.

Pulping Capacity is Rising Rapidly

Statistics for 1963 indicate that the wood-pulping capacity of Central States mills has increased about 40 percent from less than 2,000 to more than 2,700 tons per day since 1960 (fig. 1). Part of the increase was due to the addition of two mills but the major portion must be attributed to expansion of existing plants. Ohio mills have expanded their capacity by 365 tons daily, or 50 percent, since 1960.

Roundwood Produced in 216 Counties

During 1963, round pulpwood was harvested from 216 of the 615 Central States counties, only 4 more than in 1962, and 1 less than in 1961 (fig. 2). Production remains concentrated in the same areas as in the past years with the heaviest cutting going on in southern Ohio. Pulpwood was produced in 57 of Ohio's 88 counties in 1963.

About half of the 216 counties producing in 1963 produced less than 1,000 cords each. Another third produced from 1,000 to 2,499 cords. Only nine counties, seven of them in Ohio, produced more than 10,000 cords and these nine counties accounted for 37 percent of the region's total production. In 1962, when roundwood production reached its peak, 62 counties were producing more than 2,500 cords each. In 1963, the number in this class dropped to 45, the same number as in 1961.

From 1961 to 1963 production increased in 120 counties and decreased in 132 (fig. 3). The number of counties that came into production since 1961 was about equal to the number that went out of production. Most of the county production changes amounted to less than 1,000 cords. Production changed by as much as 5,000 cords in only 11 counties, 7 of them in Ohio. Six of these 11 major changes were increases.

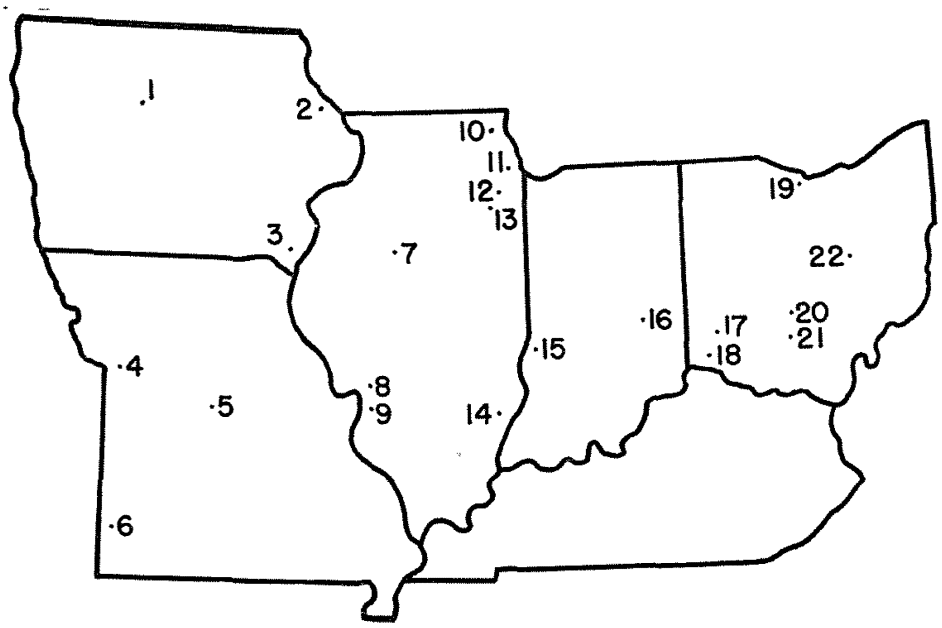
Between 1961 and 1962 changes of more than 1,000 cords were recorded in 59 counties. Forty-four of these counties showed increases in production. Between 1962 and 1963 the situation was practically reversed: 68 counties had production changes of more than 1,000 cords and decreases occurred in 44.

Movement of Roundwood

In 1963, 76 percent of the total volume of roundwood harvested in the Central States went to mills located in the producing state. Another 16 percent went to other Central States mills and the remainder was shipped to mills outside the region. All of the Iowa harvest and 98 percent of the Ohio harvest was utilized by mills in the home state.

Central States mills acquired 81 percent of their 1963 roundwood needs from the state in which they are located (fig. 4). This represents a 3 percent increase over 1961. Missouri mills still depend entirely on Missouri-grown wood. Iowa mills, on the other hand, receive 62 percent of their roundwood needs from adjoining states.

Illinois mills consumed about the same volume of Illinois-produced roundwood in 1963 as in 1961, but their procurements from outside the State fell off by about one-fifth. As a result, the percentage of their total roundwood receipts coming from Illinois increased from 75 to 80.



Number	Mill and Location	Capacity[1/] (Tons per day)
	IOWA	
1	United States Gypsum Company, Fort Dodge	Unknown
2	Barrett Division, Allied Chemical Corporation, Dubuque	200
3	Crandon Paper Mills, Incorporated, Fort Madison	125
	MISSOURI	
4	The Ruberoid Company, Kansas City	48
5	Huebert Fiberboard, Incorporated, Boonville	50
6	Tamko Asphalt Products, Incorporated, Joplin	40
	ILLINOIS	
7	Barrett Division, Allied Chemical Corporation, Peoria	195
8	Alton Box Board Company, Alton	300
9	Certain-Teed Products Company, East St. Louis	105
10	Johns-Manville Products Corporation, Waukegan	65
11	Bird and Son, Incorporated, Chicago	34
12	The Ruberoid Company, Joliet	96
13	The Philip Carey Manufacturing Company, Wilmington	25
14	The Flintkote Company, Mt. Carmel	28
	INDIANA	
15	Weston Paper and Manufacturing Company, Terre Haute	150
16	Container Corporation of America, Carthage	180
	OHIO	
17	Logan-Long Company, Franklin	60
18	The Philip Carey Manufacturing Company, Cincinnati	115
19	Johns-Manville Products Corporation, Avery	55
20	Container Corporation of America, Circleville	120
21	Mead Corporation, Chillicothe	400
22	Stone Container Corporation, Coshocton	350
	Total all Central States	2,741

1/ Source: Lockwood's Directory of Paper and Allied Trades, 1963 and other industry sources.

FIGURE 1.--Wood-using pulpmills of the Central States, 1963.

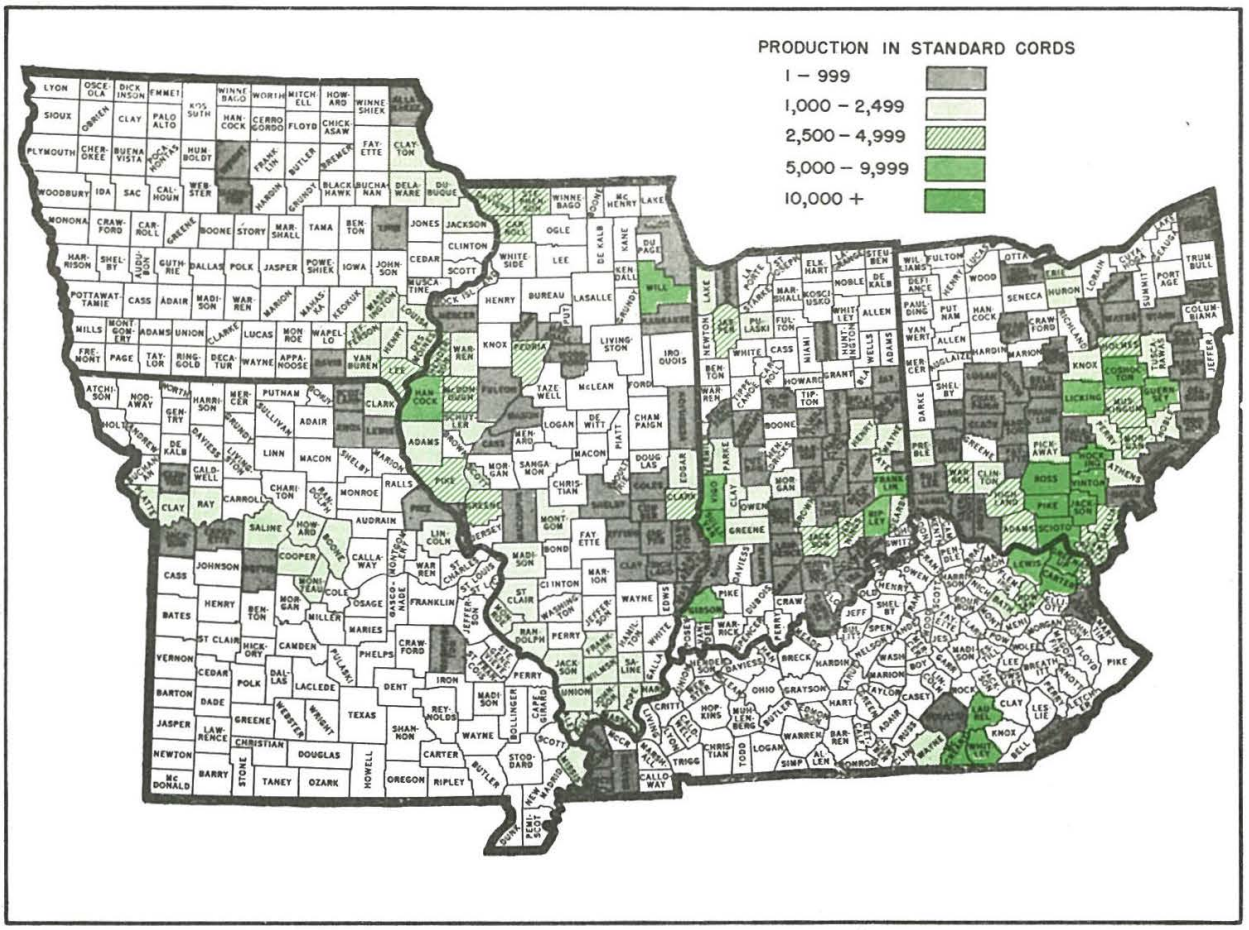


FIGURE 2.--Round pulpwood production by counties, 1963.

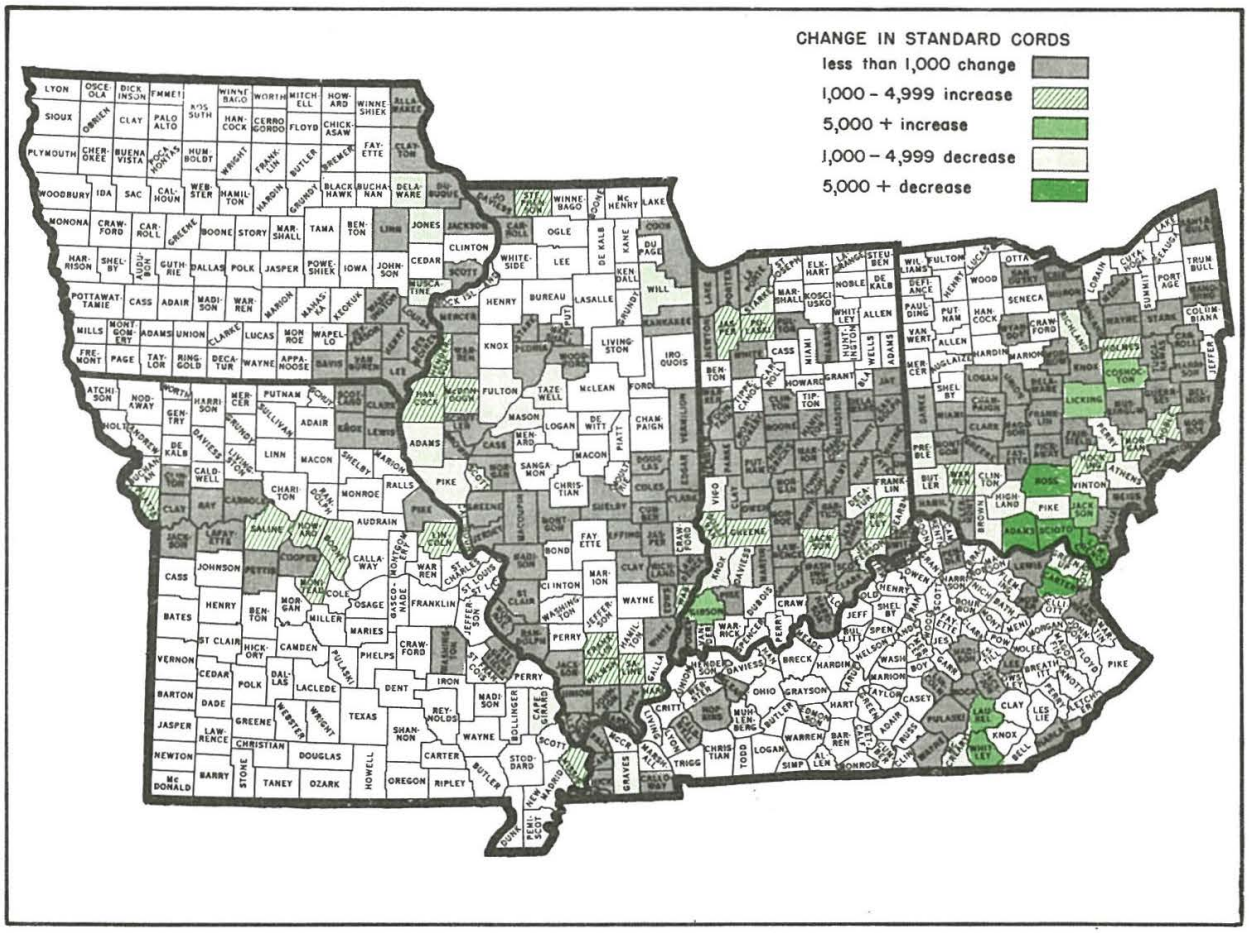


FIGURE 3.--Change in round pulpwood production by counties, 1961-1963.

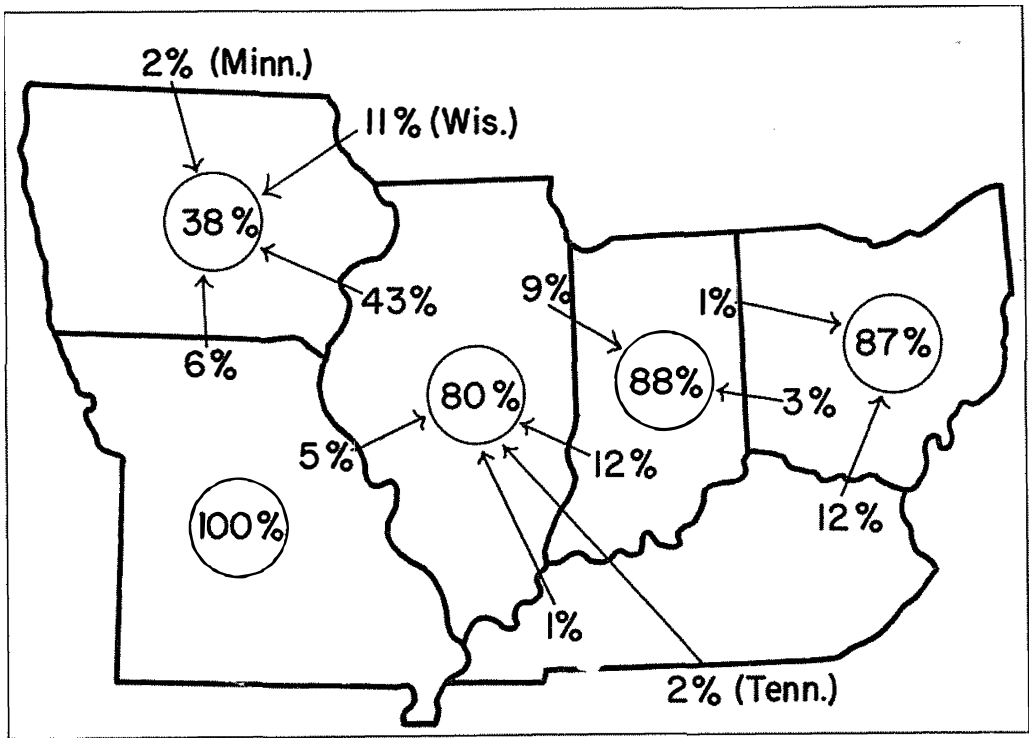


FIGURE 4.--Source of round pulpwood consumed by Central States pulpmills, 1963. (Explanation: 88 percent of the round pulpwood consumed by Indiana mills was harvested in Indiana. The rest was shipped in from Ohio and Illinois.)

Ohio mills, which have increased their use of residues greatly since 1961, procured less roundwood both from inside and outside the State in 1963. But procurements from outside fell off more sharply. As a result, Ohio mills in 1963 were obtaining 87 percent of their roundwood needs from Ohio--increase of 3 percent over 1961.

In 1963, total inter-regional shipments of round pulpwood amounted to 48,000 cords--about 7,000 cords less than in 1962, and about the same amount as in 1961. Of the total, 40,000 cords were outgoing shipments and this marked the fourth year in a row that shipments of roundwood out of the Central States exceeded incoming shipments.

Virtually all of the outflow of roundwood from the region in 1963 was Kentucky-grown pine destined for three mills to the south and east. Only two Central States mills used roundwood produced outside the region in 1963, compared with five in 1961. These incoming shipments consisted of hardwood from Tennessee, Wisconsin, and Minnesota.

Occasionally, roundwood produced in the region is transported 200 miles or more to a chipping operation or mill. For some operations, the average hauling distance is greater than 50 miles. This is true for those plants located in and around large metropolitan areas. For some others, the average hauling distance is less than 25 miles. For all Central States operations combined, the transport distance averages about 35 miles.

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